OIPE IAP1 SEP 06 2006 PATENT & TRADEMARK OFFICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT

In re application of: CULBERT

Attorney Docket No.: APL1P211/P2656

Application No.: 09/816,290

Examiner: CZEKAJ, DAVID J

Filed: March 21, 2001

Group: 2621

Title: TRACK FOR IMPROVED VIDEO COMPRESSION

Confirmation No.: 6108

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as first-class mail on September 1, 2006 in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Signed: Sue Funchess

Sue Funchess

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

The review is requested for the reasons stated on the attached sheets.

REMARKS

Examiner Failed to Show Teachings for Several Claim Limitations and Sufficient Motivation to Modify such Teachings

The Examiner rejected claims 1-4, 11-14, and 17-20 under 35 U.S.C. 102(e) as being anticipated by Tahara et al. (US 6,671,323, hereinafter "Tahara"). Tahara does not teach or disclose using the user recorded editing steps for compressing the video, as recited in claims 1, 11, and 17. In the present application, claim 1 specifically provides the limitations that "the editing track records the editing steps made by a user video editing software" and "the recorded

editing steps made by a user using video editing software in the edit track are used for compressing the video data." In other words, the actual steps the user takes during the editing of the video data, as recorded in the edit track, are used in the compression process and used to help choosing the appropriate compression algorithm. The video compressor actually receives instructions from the editing steps made by the user as recorded in the editing track. (Please see present application, page 2, lines 19-23 for more detailed description.) Therefore, claim 1 specifically requires the limitation that the editing steps made by user as recorded in the edit track are used in the compressing of the video data. The same argument may be applied to independent claims 11 and 17.

In contrast, the using of the recorded editing steps made by user during the compression of the video data is not taught in Tahara. The Examiner stated that column 11, lines 30-35 of Tahara disclose that the V-phase and H-phase variables make up part of the MPEG_ES_editing information, and column 15, lines 27-37 of Tahara disclose that the V-phase and H-phase indicate the first line to be encoded or compressed in a frame. However, although V-phase and H-phase are part of the MPEG_ES_editing information, and although V-phase and H-phase are used during the video compression process, the two variables – V-phase and H-phase – themselves are not part of the ancillary data – referred to as Ancillary_data in Tahara – being added or superimposed on the blanking intervals of the video stream. Therefore, V-phase and H-phase are not part of the editing steps made by the user as recorded in the editing track. The using of V-phase and H-phase by Tahara during the vide compression is not equivalent to the using editing steps made by the user as recorded in the editing track by the present application.

In the present application, the term "editing track" specifically refers to steps taken by a user during the video editing process and information obtained from the video editing process while a user is editing the video data, such as creating some form of special effect using a video editing software. (Please see the present application, page 5, lines 22-30 for more detailed description.) For example, the editing track may contain information such as text added to video, color correction performed, video overlay, etc. Therefore, conceptually, "editing track" in the present application is not the same as V-phase or H-phase, and variables such as V-phase and H-phase are not part of the actual editing track. Rather, editing track in the present application is more similar to "Ancillary_data" disclosed in Tahara, although the two are not exactly the same.

In Tahara, MPEG_ES_editing information contains many variables, including V-phase, H-phase, Time_code1, Time_code2, Ancillary_data, Line_number, DTS_counter, etc. (Please

see Taraha, column 11, lines 28-37.) Although Ancillary_data is contained in MPEG_ES_editing, nowhere in Tahara discloses actually using Ancillary_data during the compressing of the video data. Instead, the ancillary data are extracted from the video data during the compression process, inserted into the encoded streams as Ancillary_data, and sent to the destination along with the rest of the encoded video data. During the decompression process, the ancillary data are again extracted from the encoded streams and added back to the decoded video data. (Please see Taraha, column 3, lines 51-65.) Thus, ancillary data merely are sent along with the rest of the video data, but are not used during the compression and decompression process of the video data. Therefore, in Tahara, the editing information (edit track) – ancillary data – are not used during the compressing of the video data.

In contrast, the present application uses the editing steps made by the user as recorded in the editing track during the compression process of the video data in order to shorten the time required to compress those video data that contain edited special effects. (Please see present application, page 1, lines 17-20 and page 6, lines 1-6 and 21-32.) For example, information contained in the editing track, such as recorded user editing steps, may be used to form predictive motion vectors and difference vectors, because the edited regions may result in greater errors. (Please see present application, page 7, lines 24-31.) Similarly, information contained in the editing track may be used to determine whether to increase to decrease pixel resolution for blended video frames. (Please see present application, page 9, lines 19-32.) Other examples have been given on pages 5-10 of the present application. Unlike Tahara, information contained in the editing track is not merely sent long with the rest of the audio and video data. Instead, the editing track is an integral part of the compression and decompression process.

In addition, Column 22, lines 19-34 of Tahara teaches that decoding circuit 402 extracts information described as MPEG_ES_editing_information. This relates to decoding (decompression), and therefore does not teach using MPEG_ES_editing_information for encoding (compression). Therefore, the Examiner failed to point out anything in Tahara that teaches using the edit track (ancillary data as called in Tahara) for compressing the video data.

With respect to claims 3 and 13, the Examiner stated that column 19, lines 1-25 of Tahara discloses the use of f_codes for defining a search range or window for searching motion vectors. The variable f_codes indicates search range in the horizontal or vertical motion. (Please see Tahara, column 19, lines 3-15.) As discussed above, Tahara's ancillary data, and not f_codes, is similar to the present application's editing track. Tahara does not disclose using ancillary data

for searching and creating motion vectors. In contrast, the present application uses information contained in the editing track to help predict motion vectors and difference vectors. (Please see present application, page 7, lines 24-31.)

The Examiner rejected claims 5-10 and 15-16 under 35 U.S.C. 103(a) as being unpatentable over Tahara in view of Want et al. (US 5,802,361, hereinafter "Wang").

Because Tahara does not teach or disclose using editing track for compressing and decompressing video data, it is not obvious to combine Tahara and Wang to obtain all the limitations cited in claims 5-10 and 15-16. For example, claims 5 and 15 recite that the compressing of the video data further comprises using information in the edit track to determine a number of I-frames that will be used for compression. It would not be obvious to combine Tahara and Wang to obtain the invention as recited in Claims 5 and 15. The Examiner did not provide motivation as to why a broadcast system of Tahara would be motivated to add the video search tool of Wang.

The Examiner stated that the creating a track of edited video data is shown in Figure 5h of Wang and that creating at least one object in the edit track is disclosed in Wang, column 16, lines 53-65, where the object is a rectangle. At column 14, lines 34-35, Wang states that Figures 5 through 9 show an embodiment of a graphic user interface for constructing a search inquiry. Therefore Figure 5h of Wang and Figure 5i and 5b, discussed in column 16, lines 53-65, of Wang, cited by the Examiner do not teach a video editing tool or an edit track, but a tool for generating a search request. In addition, column 16, lines 32-46 of Wang describe Figure 5h as a way of adding or modifying a bookmark to indicate locations in a "video sequence to be edited." The bookmark does not edit the video sequence but merely marks locations "to be edited."

Because independent claims 1, 11, and 17 discloses limitations not taught by Tahara, they should be patentable. The dependent claims 2-10, 12-16, and 18-20 are patentable for at least the same reasons as the independent claims, upon which they ultimately depend. These dependent claims recite additional limitations that further distinguish the claims from the cited references.

For example, claims 2 and 12 recite that the computer readable code uses information in the edit track to determine the bit resolution of quantization for a region defined within the edit track for compressing the video data. The Examiner cited col. 13, lines 52-67, of Tahara as teaching horizontal_size_value, vertical_size_value, aspect_ratio_information, and bit_rate_value is read from the edit track. Claims 3 and 13 further recite that the computer code

for compressing further comprises using computer readable code for using the motion information in the edit track to create a motion vector. Claims 4 and 14 further recite that the computer readable code for compressing the video data further comprises computer readable code for using the edit track to create a difference vector. Claims 5 and 15 further recite that the compressing of the video data further comprises using information in the edit track to determine a number of I-frames that will be used for compression. Claims 6, 7, and 16 further recite creating a video track of edited video data and computer readable code for creating at least one edit object in the edit track, wherein the edit object defines a region that has been edited and a type of edit. Claim 17 further recites the system for compressing video data further comprises an edit track reader for accessing data within the edit track and generating instructions based on the data within the edit track and that the video compressor receives the instructions from the edit track reader and compresses the edited video according to the instructions from the edit track reader.

In view of the foregoing, it is respectfully submitted that the rejections of all pending claims should be withdrawn.

Respectfully submitted,
BEYER WEAVER & THOMAS, LLP

Michael Lee
Registration No. 31,846

P.O. Box 70250
Oakland, CA 94612-0250
Telephone: (650) 961-8300